

RN02138

Serial number: 10/533,212

AMENDMENT

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### Listing of Claims:

1-21 (Canceled)

- 1 ~~22~~. (Currently amended) A process for producing carboxylic acids by oxidation of a hydrocarbon with oxygen or a gas containing oxygen with the formation of esters in a reaction medium, in the presence of a monocarboxylic acid-based solvent and of an oxidation catalyst, comprising the steps of hydrolysing the esters formed as byproducts by carrying out a treatment of the reaction medium before extraction of the carboxylic acids or a treatment of the organic phase derived from the reaction medium after extraction of the carboxylic acids formed, wherein said hydrolysis is carried out by addition of a strong acid to the medium to be treated.
- 2 ~~23~~. (Currently amended) A process according to Claim ~~22~~<sup>1</sup>, wherein the ~~hydrolysis step is carried out by addition to the medium to be treated of a strong acid and~~ maintenance of said medium is maintained at a temperature of greater than 50°C, optionally of between 80°C and 200°C.
- 3 ~~24~~. (Currently amended) A process according to Claim ~~22~~<sup>1</sup> ~~23~~, wherein the strong acid has a pKa of less than or equal to 2.
- 4 ~~25~~. (Previously presented) A process according to Claim ~~24~~<sup>3</sup>, wherein the strong acid is carried on or attached to an inert material such as a resin.

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- 5 ~~26~~. (Previously presented) A process according to claim ~~25~~<sup>4</sup>, wherein the resin is a sulphonic acid resin.
- 6 ~~27~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the extraction of the carboxylic acids produced from the reaction medium is carried out by means of separation by settling out.
- 7 ~~28~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the extraction of the carboxylic acids produced from the reaction medium is obtained by liquid/liquid extraction.
- 8 ~~29~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the organic phase obtained after extraction of the carboxylic acids and hydrolysis of the esters is recycled at the oxidation step.
- 9 ~~30~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the organic phase recovered after separation of the diacids formed is subjected to distillation of the compounds having a boiling point less than or equal to that of the alcohol formed during the oxidation step, before the hydrolysis step.
- 10 ~~31~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the organic phase recovered after separation of the diacids formed is subjected to distillation of the compounds having a boiling point less than or equal to that of the acid solvent used in the oxidation step, before the hydrolysis step.
- 11 ~~32~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the acids formed during the hydrolysis step are extracted from the medium with a solvent for said acids.

- 12 ~~33~~ (Previously presented) A process according to claim ~~32~~<sup>11</sup>, wherein the oxidation solvent present in the hydrolysis medium is extracted and purified before recycling at the oxidation step.
- 13 ~~34~~ (Previously presented) A process according to claim ~~32~~<sup>11</sup>, wherein the acids recovered from the hydrolysis medium are mixed with the diacids extracted from the oxidation medium or in the oxidation medium before extraction of the diacids.
- 14 ~~35~~ (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the hydrocarbon is a cycloalkane.
- 15 ~~36~~ (Previously presented) A process according to claim ~~35~~<sup>14</sup>, wherein the cycloalkane is cyclohexane or cyclododecane.
- 16 ~~37~~ (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the solvent is a monocarboxylic acid having from 1 to 6 carbon atoms, or an acid lipophilic in nature, having from 7 to 20 carbon atoms.
- 17 ~~38~~ (Previously presented) A process according to claim ~~37~~<sup>16</sup>, wherein the lipophilic acid is hexanoic acid, heptanoic acid, octanoic acid, 2-ethylhexanoic acid, nonanoic acid, decanoic acid, undecanoic acid, dodecanoic acid, stearic acid (octadecanoic acid) and their permethylated derivatives, 2-octadecylsuccinic acid, 3,5-ditert-butylbenzoic acid, 4-tert-butylbenzoic acid, 4-octylbenzoic acid, tert-butyl hydrogen orthophthalate, alkyl naphthenic acid, alkyl anthracenic acid, a substituted derivative of phthalic acids, or a fatty diacid.
- 18 ~~39~~ (Previously presented) A process according to claim ~~38~~<sup>17</sup>, wherein the lipophilic

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acid is a dimer fatty acid, a naphthenic acid substituted with tert-butyl groups,  
or an anthracenic acid substituted with tert-butyl groups.

19 ~~40~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the catalyst is  
a transition metal.

20 ~~41~~. (Previously presented) A process according to claim ~~40~~<sup>19</sup>, wherein the catalyst is  
based on manganese in combination with a co-catalyst which is cobalt,  
zirconium, cerium, hafnium or iron.

21 ~~42~~. (Previously presented) A process according to claim ~~22~~<sup>1</sup>, wherein the  
polycarboxylic acid produced is adipic acid, succinic acid, glutaric acid, dodecanedioic  
acid or a mixture thereof.